

Supplementary Report of the Water Committee

The Committee respectfully submit the following correspondence with the State
Board of Health and its Chief Engineer.

February 4, 1909.

TO THE WATER SUPPLY COMMITTEE,

SOUTHBOROUGH, MASSACHUSETTS,

MESSRS. ROBERT M. BURNETT,
CHARLES L. FAIRBANKS,
PAUL S. LINCOLN,
FRANCIS WRIGHT, AND
J J HENDERSON

GENTLEMEN

The State Board of Health received from you on December 15, 1908, an application for advice as to a water supply for the town of Southborough, accompanied by a plan by your engineer, showing a proposed piping system and standpipe for supplying the four principal villages of the town, viz., Southborough Center, Fayville, Southville and Cordaville, with water to be taken from the ground on the south side of the Worcester turnpike about half a mile west of the village of Fayville, and on the southerly side of the Sudbury Reservoir of the Metropolitan Water Works.

It appears that three test wells have been driven in this locality to depths ranging from 21 to 31 feet, each of which penetrated a gravel stratum, from which water could be pumped in small quantities with a hand-pump. Tests have also been made in the locality known as Bagley's gravel pit on the westerly side of the Sudbury Reservoir south of the New York, New Haven and Hartford Railroad and at the Buck Farm on the easterly side of the reservoir about three-quarters of a mile north of the railroad. At the gravel pit three wells were driven to depths of 20, 15 and 10 feet respectively, but it is reported that in each case ledge or boulder was finally encountered. The tests at the Buck Farm were apparently unfavorable, all of the wells striking ledge or boulders and but little water being obtainable from any of them.

The Board has caused the localities indicated to be examined by one of its engineers and samples of the water from two of the test wells near Fayville and one in the gravel pit to be analyzed.

The water of all of these samples was turbid and contained much mineral matter, so that it is difficult to judge of their true character. The water of the wells at the location near Fayville was free from organic matter, and the indications are that water of good quality could be obtained from

the ground at that place. The water of the well at Bagley's gravel pit showed considerable evidence of pollution, and the indications furnished by this sample are not favorable for obtaining good water in that locality

Regarding the quantity of water obtainable from the locality near Fayville, the tests thus far made are not very favorable to obtaining enough water there for the requirements of Southborough. On account of the small size of the watershed the yield of wells at that place would be dependent largely upon the quantity of water which would filter through the ground from the Sudbury Reservoir, but as the wells did not furnish water very freely, the indications cannot be said to be favorable for obtaining any very considerable quantity of water in that way, especially at times when the reservoir is drawn down.

Considering the unfavorable indications furnished by these tests, the Board does not recommend the construction of works for taking water for the supply of Southborough from the sources indicated.

There appear to be several localities at a somewhat greater distance from the principal villages of the town where the indications are favorable for obtaining water from the ground in considerable quantity, and the Board recommends that further and more thorough tests be made at some of the more favorable places before a source of water supply for the town is definitely selected. The Board will assist you in further investigations by making the necessary analyses of water and will give you further advice when you have the results of further investigations to present.

By order of the Board,

(Signed) MARK W RICHARDSON,

Secretary

December 10, 1908

DR. W C. HANSON,

ACTING SECRETARY, STATE BOARD OF HEALTH, BOSTON

DEAR SIR

The Town of Southborough is investigating, through a Committee, the advisability of putting in a water supply for its four villages of Southborough, Fayville, Cordaville and Southville and the writer is Chairman of this Committee.

The proposition now is to put a twelve (12) inch main through the main streets of Southborough and Fayville and a ten (10) inch main through Cordaville and Southville.

The villages of Southborough and Fayville are directly on the banks of the Sudbury basin and appreciating the care that is necessary to keep the water supply of the Metropolitan district undefiled, we feel before making the great expenditure necessary for our water supply, (practically from \$100,000 to \$150,000) that we should be advised by the experts on your Board as to what precautions would be necessary to be taken to meet the increase in our sewerage under the conditions of the new water supply and the estimated expense the Town would be under in meeting these precautions.

Very truly yours,

(Signed) ROBERT M. BURNETT

Commonwealth of Massachusetts

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State Board of Health

Office of

Chief Engineer

Room 140, State House, Boston

X. H. GOODNOUGH, CHIEF ENGINEER

Dec. 17, 1908.

MR. ROBERT M BURNETT,

9 BOSWORTH STREET,

BOSTON, MASS.

DEAR SIR

Your letter of December 10 to Dr Hanson has been referred to me.

In general, the introduction of a water supply in a town or village is followed by an increase in the amount of liquid household wastes requiring disposal and eventually makes sewerage necessary in thickly populated areas.

The above is a general statement which does not by any means apply in all cases. Towns situated upon areas composed of sandy or gravelly soil, where the ground water level is normally at a considerable depth below the surface, often find no difficulty in the disposal of sewage by means of cesspools until the town has grown to contain a population of several thousand. For example, a large part of the village of Needham is situated on a gravelly plain, and it does not appear that any serious difficulty in the disposal of sewage has yet been experienced in much of the thickly populated area in that town.

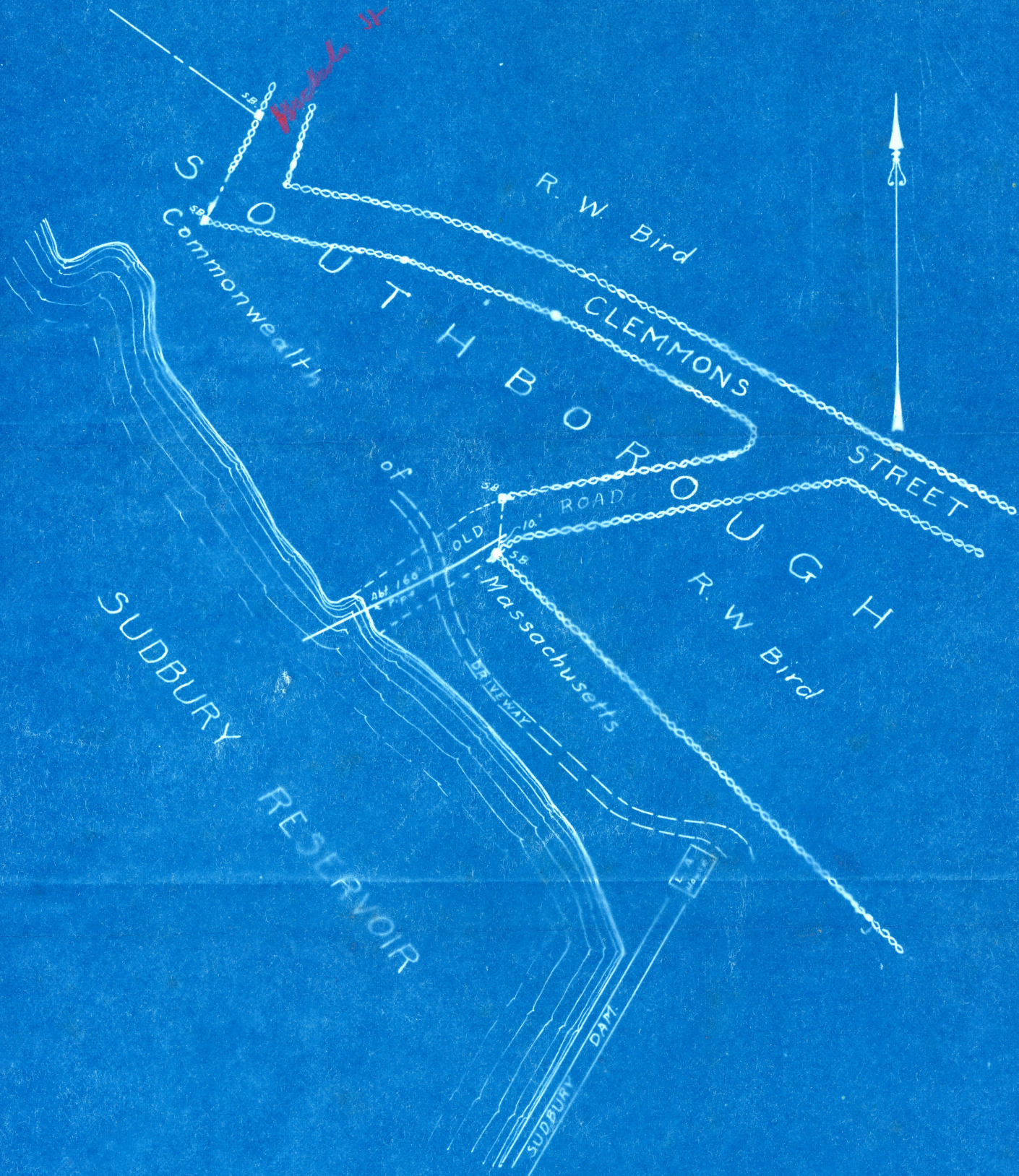
A part of the village of Southborough is built upon gravelly soil, while in another part of the village the soil is, I believe, of a less pervious character. I have never examined the village in detail with the object of determining to what extent sewerage would be likely to be necessary if a water supply should be introduced, so that I am unable to give you a more definite statement than this,— that if a water supply shall be introduced into the village, there is likely to be increasing difficulty in preventing the pollution of neighboring waters until sewers shall be provided.

As to an estimate of the expense of the necessary sewers to prevent danger of pollution of local waters, I am unable to give you any information.

Yours truly,

X. H. GOODNOUGH,

Chief Engineer



Scale 100 feet to an inch.

See Sudbury Reservoir Land Plans, Sheet C-1